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RD-681/UHN and RD-674A/UHN Recorder Reproducers

5. FUNDING NUMBERS

6. AUTHOR(S)

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11. SUPPLEMENTARY NOTES

12a. DISTRIBUTION/AVAILABILITY STATEMENT

Approved for public release; distribution is unlimited.

12b. DISTRIBUTION CODE

13. ABSTRACT *(Maximum 200 words)*

The RD-674A/UHN and RD-681/UHN Recorder-Reproducers are Commercial-off-the-Shelf (COTS) equipments that have been mechanically modified to allow the equipment to pass MIL-S-901D shock tests. All components in the recorders are readily available on the commercial market. The recorders contain a 586 microprocessor that operates at 133 MHz. They also contain 16 bit A/D and D/A converters for signal sampling and reproduction. Both of these components are found in the Military Critical Technologies List (MCTL) Section 5.5 Table 5.5-1 Microelectronics Militarily Critical Technology Parameters.

14. SUBJECT TERMS

RD-674A/UHN RD-681UHN Recorder-Reproducer

15. NUMBER OF PAGES

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16. PRICE CODE

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RD-681/UNH RECORDER-REPRODUCER

CLEARED FOR
OPEN PUBLICATION
22 Apr 99
PUBLIC AFFAIRS OFFICE
NAVAL AIR SYSTEMS COMMAND
H. Howard

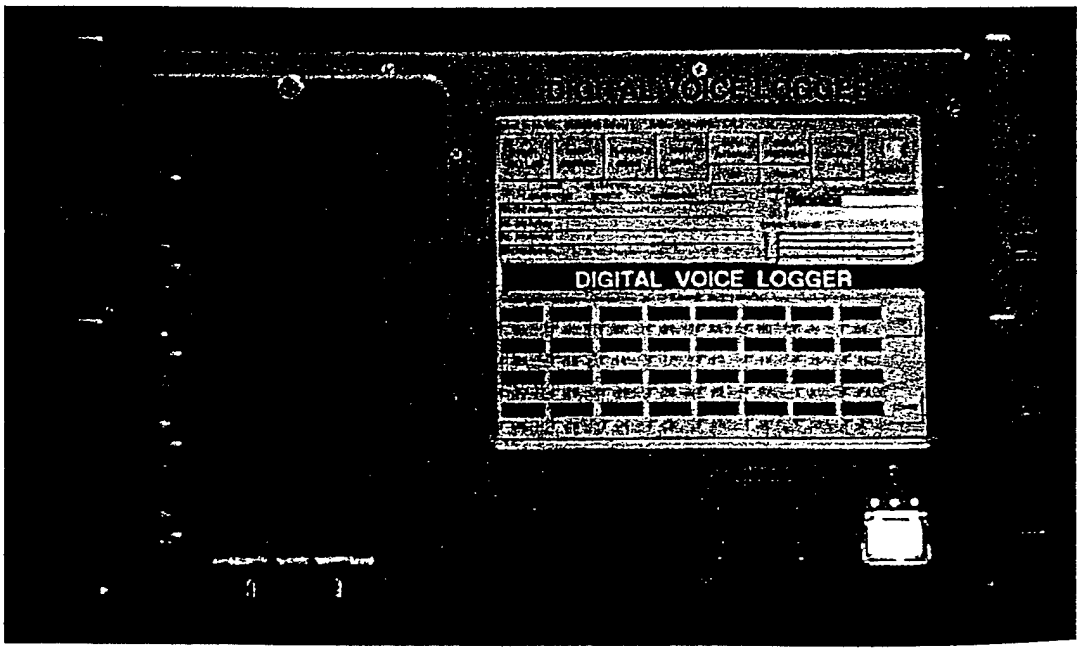
WHY HAVE A VOICE RECORDER?

Voice recorders provide a precise and verbatim log of internal and external radio voice communications. This information can be invaluable for:

- *Immediate playback transmissions during combat or emergency situations to determine exact message received or transmitted.*
- *Determining if proper operational & radio telephone procedures are being followed.*
- *Conducting incident or accident analysis.*
- *Providing court-acceptable records.*

DESCRIPTION

- The RD-681/UNH is a commercial-off-the-shelf (COTS), PC-based, state-of-the-art, voice recording system that automatically records when voice signals are present at any one of 32 input channels. It operates in the Windows environment & can record 32 audio channels (expandable to 80). A major advantage of the RD-674A/UNH is that audio recording need not be interrupted to provide simultaneous & synchronized playback of four channels of audio. This allows recording to continue while the operator plays back previously recorded transmissions. Voice data is digitized by the processor & stored on rewritable magneto-optical disks. Each disk can record up to 230 hours of voice transmissions. Commands & operator input may be given to the computer via touch screen or keyboard. The system can be housed in a standard EIA cabinet with a 19-inch-rack configuration. Since the system does not contain a magnetic hard disk drive, communications security is obtained when the magneto-optical disks containing the recorded data are ejected. To ensure the rigid quality control standards are maintained, each RD-681/UNH is subjected to a total system end-to-end test.



FEATURES

- Meets communications security requirements for shipping.
- Signal recognition circuitry records only voice signals.
- Current IRIG-B/HAVEQUICK time format & time-of-day synchronization.
- Multi-channel voice data archiving, including automatic switching of recording drives in the event of drive or disk failure or when the recording disk is full.
- Remote & internal alarm to warn that the disk is in danger of becoming full or warn of media error.
- CD-ROM Computer-based training.
- Journal of all magneto-optical disks with data & all recorded audio time tagged for easy retrieval.
- Flat panel display:
  - Will not implode on impact, making it safer for an operator in a shipboard environment.
  - Less EMI susceptible than CRT displays.
  - Bright & viewable off axis.
- Password protected to prevent unauthorized removal or erasure of magneto-optical disks.
- System self-test diagnostics.
- Operator Help Menu.

SPECIFICATIONS

Nomenclature:	RD-681/UNH Recorder-Reproducer
NSN:	5835-01-461-8184
RIC:	00039040
Operating Sys:	Windows 95
Display:	
Type	Color
TFT	10" (diagonal)
Keyboard:	80 key IBM-Compatible
Drives:	
Operating	2.6 GB magneto-optical
1 Priority	2.6 GB magneto-optical
2 Archive	2.6 GB magneto-optical
1 Current	2.6 GB magneto-optical
Storage/disk:	230 hours at 1:4 comp.
Compression:	1:4 ADPCM/1:5 ADPCM
Playback:	
Access time	40 ms
Monitor	Simultaneous 1-32 channels
Search by	Channel, date or time
Multi-channel	Up to 4 channels real-time
Alarm:	Internal/external Dry contacts
Impedance:	Input: 25 Kohms Output: As low as 50 ohms
Isolation:	>80 dB between channels
Outputs:	
Audio	0.5 W
Headphones	8-600 ohms
Line	0 dBm
Power:	
Voltage	90 to 130/180 to 250
Frequency	47 to 63 Hz
Consumption	300 W
Temperature:	
Operating	0 to 45 degrees C
Shipping	-40 to 60 degrees C
Storage	0 to 60 degrees C
Relative Humidity:	20 - 80% non-condensing
Weight:	50 lbs.
Height:	10.5"
Width:	19.125"
Depth:	17.5" w/o handles 19.375" with handles

NAWC Aircraft Division NAVAL AIR WARFARE CENTER

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RD-674A/UNH Recorder-Reproducer

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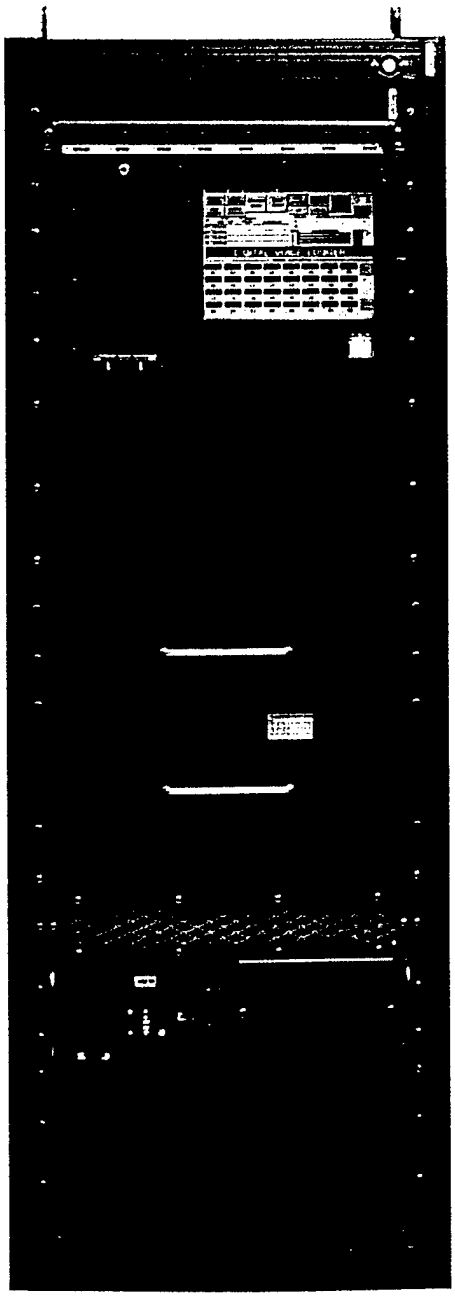
DESCRIPTION

- The RD-674A/UNH was developed to replace the RD-379/390 recorder & RP-214 reproducer, which are no longer manufactured or supported by industry sources & are obsolete, unreliable, & costly to maintain. The RD-674A/UNH is a commercial-off-the-shelf (COTS), PC-based, state-of-the-art, voice recording system that automatically records when voice signals are present at any one of 32 input channels. It operates in the Windows environment & can record 32 audio channels (expandable to 80). A major advantage of the RD-674A/UNH is that audio recording need not be interrupted to provide simultaneous & synchronized playback of four channels of audio. This allows recording to continue while the operator plays back previously recorded transmissions. Voice data is digitized by the processor & stored on rewritable magneto-optical disks. Each disk can record up to 230 hours of voice transmissions. Commands & operator input may be given to the computer via a touch screen or a keyboard. The system can be housed in a standard EIA cabinet with a 19-inch-rack configuration. Since the system does not contain a magnetic hard disk drive, communications security is assured when the magneto-optical disks containing the recorded data are ejected. To ensure rigid quality control standards are maintained, each RD-674A/UNH is subjected to a total system end-to-end test & is shock & vibration qualified in accordance with MIL-S-901 Grade B & MIL-STD-167. Class D Ship Alterations (SHIPALTs) have been approved for CG 49, DDG 51 & FFG-class ships & are pending for AOE 6, AGF 3/11, CV 65/67, CVN 65/68, LCC 19, LHA 1, LHD 1, LPD 4, LSD 36/49, & MCM 1-class ships.



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- Remote & internal alarm to warn that the disk is in danger of becoming full or warn of media error.
- CD-ROM Computer-based training.
- A disk storage drawer to store up to 81 magneto-optical disks.
- Navy Center-approved uninterruptible power supply (UPS), providing power conditioning & up to one hour of standby power.
- Journal of all magneto-optical disks with data & all recorded audio time tagged for easy retrieval.
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Multi-channel	Up to 4 channels real-time
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Vibration:	MIL-STD-167
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Power:	
Voltage	90 to 130/180 to 250
Frequency	47 to 63 Hz
Consumption	300 W
Temperature:	
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Shipping	-40 to 60 degrees C
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Relative Humidity:	20 - 80% non-condensing
Weight:	396 lbs.
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